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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,978	09/22/2006	Hayato Yoshino	1018773-000046	3260

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EXAMINER

DESAI, NAISHADH N

ART UNIT	PAPER NUMBER
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2834

NOTIFICATION DATE	DELIVERY MODE
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11/14/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/593,978	Applicant(s) YOSHINO ET AL.	
	Examiner NAISHADH N. DESAI	Art Unit 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 5/30/2008 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Landgraf (US 4322665).

1. As per independent claim 1:

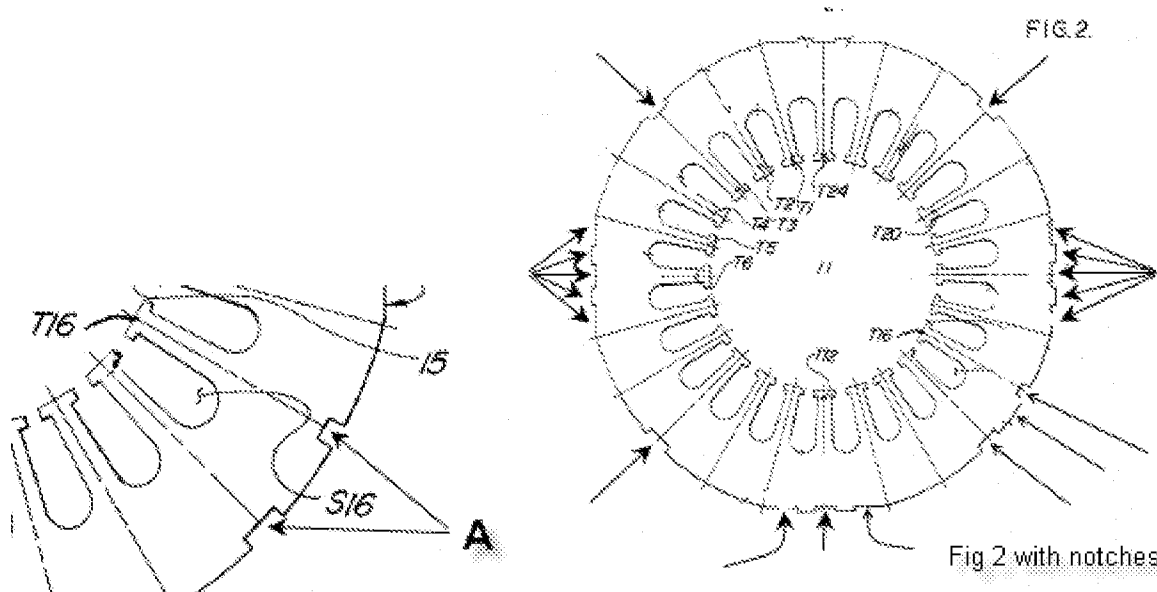
A single-phase motor comprising (abstract):

a stator including a stator iron core formed by laminating a plurality of electromagnetic steel sheets (Col 3 ll 46-50) and provided with a slot and single-phase two-pole distributed windings composed of a main winding and an auxiliary winding contained in the slot (abstract and Col 3 ll 57-65);

a rotor placed through a gap on an inner circumference of the stator (Col 3 ll 46-57), and

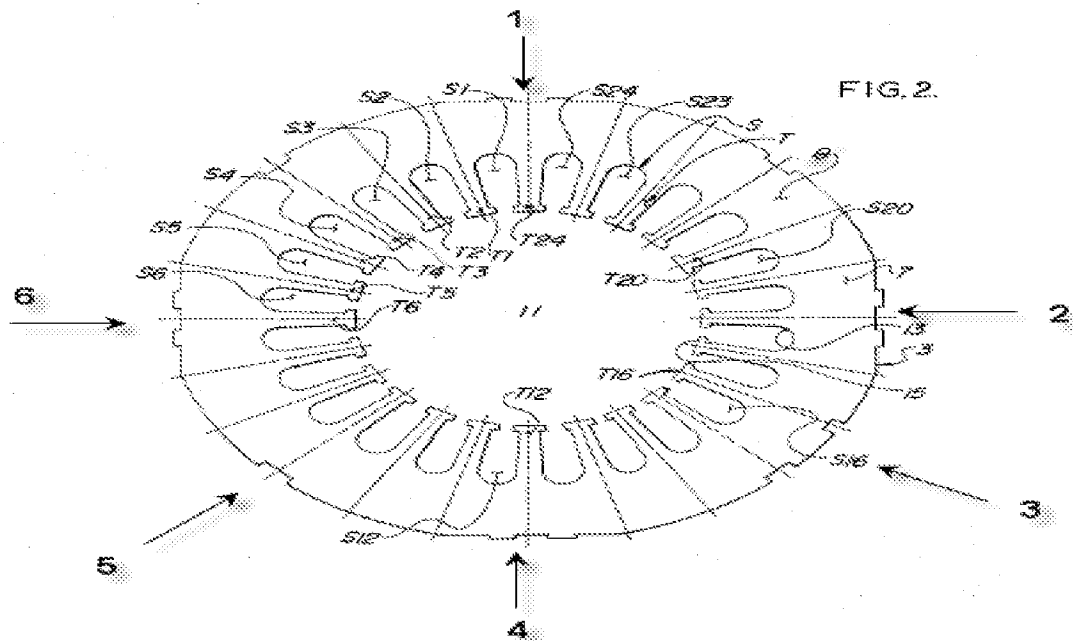
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at least five notches each notch formed by a single uninterrupted roughly straight line on an outer circumference edge of the stator iron core (re-illustrations of Fig 2 and close up of portion 3 by examiner below), so that a quadrangle is formed by straight lines including four notches out of the at least five notches (Fig 2 below with arrows shows that a quadrangle can be drawn if straight lines are drawn from the notches).



2. As per dependent claim 2:

The single-phase motor of claim 1, wherein the single-phase motor comprises six notches, so that a rectangle or a square is formed by straight lines including four notches out of the six notches (Fig 2,1-6 below and Fig 2, arrows above shows that several straight lines can be drawn on an outer circumference of the stator to form a rectangle or square out of 4 lines).



3. As per dependent claim 7:

A hermetic compressor comprising the single-phase motor of claim 1 (Col 5 line 20 and Col 6 ll 42-45).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Landgraf (US 4322665) in view of Noguchi et al (JP 11125183 provided by applicant).

4. As per dependent claim 3:

The single-phase motor of claim 1, wherein the stator iron core is provided with a plurality of slots, among a plurality of slots, at an outer circumferential side of which a notch is not placed, at least one slot is made to have a deeper depth in a radial direction than a slot, at an outer circumferential side of which a notch is placed, so that a large slot and a small slot are formed.

Landgraf teaches the device as claimed above. Landgraf does not teach a stator core having varying slot depths. Noguchi et al clearly teaches a stator core having slots with different depths in the radial direction. It would have been obvious to a person having ordinary skills in the art at the time the invention was made to use Noguchi et al's stator having varying slot depth in Landgren's device. The motivation to do so would be that it would allow one to form a stator slot with a specific shape regardless of its external shape (abstract of Noguchi et al). It would also allow common use of a press winding line when wanting to manufacture a high output type sealed compressor by enlarging the shape of the stator steel plate without changing the shape of the stator's large or small slots (abstract of Noguchi et al).

5. As per dependent claim 4:

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The single-phase motor of claim 3, wherein winding to be contained in the large slot has a higher cross section ratio for a slot area than winding to be contained in the small slot (abstract of Noguchi et al and it would be obvious that the cross sectional ratio of the winding in a small slot area would be smaller than the cross sectional ratio of a winding in a larger slot area).

6. As per dependent claim 5:

The single-phase motor of claim 3, wherein an outer winding of a concentric main winding is inserted in the large slot (abstract of Noguchi et al and Fig 3 of Landgraf discloses that the outer winding of a main winding is inserted concentrically into a large slot).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Landgraf (US 4322665).

7. As per dependent claim 6:

The single-phase motor of claim 1, wherein, in case of inserting windings, the main winding is inserted after the auxiliary winding is inserted to the slot.

In regards to claim 6, the method of making limitations are not germane to the patentability of the apparatus and have not been given patentable weight. The patentability of the product does not depend on its method of production. If the product in the product by process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process". In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966(Fed. Cir. 1985). In this

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instance the case it is obvious to change the sequence of how the windings are inserted into the slots to ease manufacturing of the device.

Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Landgraf (US 4322665) in view of Takeda et al (US 5796190)

8. Regarding independent claim 8, Landgraf teaches:

A single-phase motor comprising (abstract):

a stator including a stator iron core formed by laminating a plurality of electromagnetic steel sheets and provided with a slot between each of a plurality of stator teeth (Col 3 ll 46-50 and Fig 2 above), and

single-phase two-pole distributed windings composed of a main winding and an auxiliary winding contained in the slot (abstract and Col 3 ll 57-65);

a rotor placed through a gap on an inner circumference of the stator (Col 3 ll 46-57), and

a plurality of evenly spaced semicircular notches having an approximately same width as the stator teeth and each provided at an outer side of each of the plurality of stator teeth on an outer circumference of the stator iron core (Fig 2,5 above).

Landgraf does not literally teach that that there are “a plurality of evenly spaced semicircular notches having an approximately same width as the stator teeth and each provided at an outer side of each of the plurality of stator teeth on an outer circumference of the stator iron core”. However, examiner notes that Fig 2,5 above of

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Landgraf appears to teach a plurality of semicircular notches, However perhaps not inherently uniformly distributed or evenly spaced.

Takeda et al (Fig 3a,111c,111e) clearly teaches the use of “a plurality of evenly spaced semicircular notches having an approximately same width as the stator teeth and each provided at an outer side of each of the plurality of stator teeth on an outer circumference of the stator iron core”. It would have been obvious to a person having ordinary skills in the art at the time the invention was made to modify the device of Landgraf with the teachings of Takeda et al to make the stator have a plurality of evenly spaced semicircular notches having an approximately same width as the stator teeth and each provided at an outer side of each of the plurality of stator teeth on an outer circumference of the stator iron core. The motivation to do so would be that it would allow easier assembly and accurate mounting of the device (Col 3 ll 9-12 of Takeda et al).

Prior art teaches the use of notches on the stator, whether it is of a particular shape is a matter of obvious engineering design choice based on the configuration of the stator's size/shape as well as the location of the rotor, the shaft and housing. The motivation would be based on the parameters of space availability, location of the rotor with respect to the stator, as well as size/ and shape of the stator and housing, to determine the size and shape of the notches. A change in shape is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955)

9. Regarding claim 9, Landgraf teaches:

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A hermetic compressor comprising the single-phase motor of claim 8 (Col 5 line 20 and Col 6 ll 42-45).

Conclusion

Response to Arguments

10. Applicant's arguments filed 10/30/2008 have been fully considered but they are not persuasive.

Regarding applicant's argument that portions 1,2,4 and 6 are not teaching roughly straight lines in relation to Fig 2 of Landgraf. Examiner believes Fig 2 and portions 1,2,4 and 6 do show "...a single uninterrupted roughly straight line...". They do include other portions which have tabs which protrude from the outer circumference edge of the core, yet they also contain smaller portions of uninterrupted straight lines. Examiner would like to remind applicant that a slight curvature on a line can be considered as a "roughly straight line". Cited prior art by examiner read on the claims as presented by applicant. Applicant's arguments are found non persuasive by examiner.

Regarding applicant's arguments with respect to claims 8 and 9 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NAISHADH N. DESAI whose telephone number is (571)270-3038. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Quyen Leung can be reached on (571) 272-8188. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NND

/Dang D Le/

Primary Examiner, Art Unit 2834